A Prospectus on
Cook County ERP Systems

and the
Need for the ERP Center of Excellence

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July 30, 2012

Revision History

Revision Number	Date	Author	Comment
Original Document	06/25/12	Valerie Holden	Purpose of document is explained in Executive Summary.
Revisions	07/30/12	Valerie Holden	Changes to the document were made 07/30/12, to more clearly explain the system development life cycle management phases (SDLC). The Revision History page was added to this report.

Executive Summary

This report is provided to illuminate the need for the Cook County ERP Center of Excellence (ERP CoE). It is the first such report that provides a comprehensive overview of Cook County's ERP systems; County's ERP total cost of ownership (TCO)[1]; and the 'factors' that have diminished County's ability to realize business value that is proportionate to its ERP investment. This information is provided to help the reader understand County's ERP project history; its needs; and the strategy behind the ERP Center of Excellence.

Figure 1 conveys a little known fact, i.e. County's ERP system environment is expansive, and that it is compromised of (9) ERP systems. Its JD Edwards (1999) system is managed by the Bureau of Technology, with 38% of the total number of ERP system users supported by this system. However, public records reflect that agencies began to acquire standalone ERP systems in 2005, as confidence in the JD Edwards (1999)[2] system begin to wane. Since 2005, County has acquired (8) standalone ERP systems and these systems are managed by independently elected officials, the Forest Preserve District, and the Cook County Health & Hospitals System. Nearly two thirds of all ERP system users are supported by standalone ERP systems.

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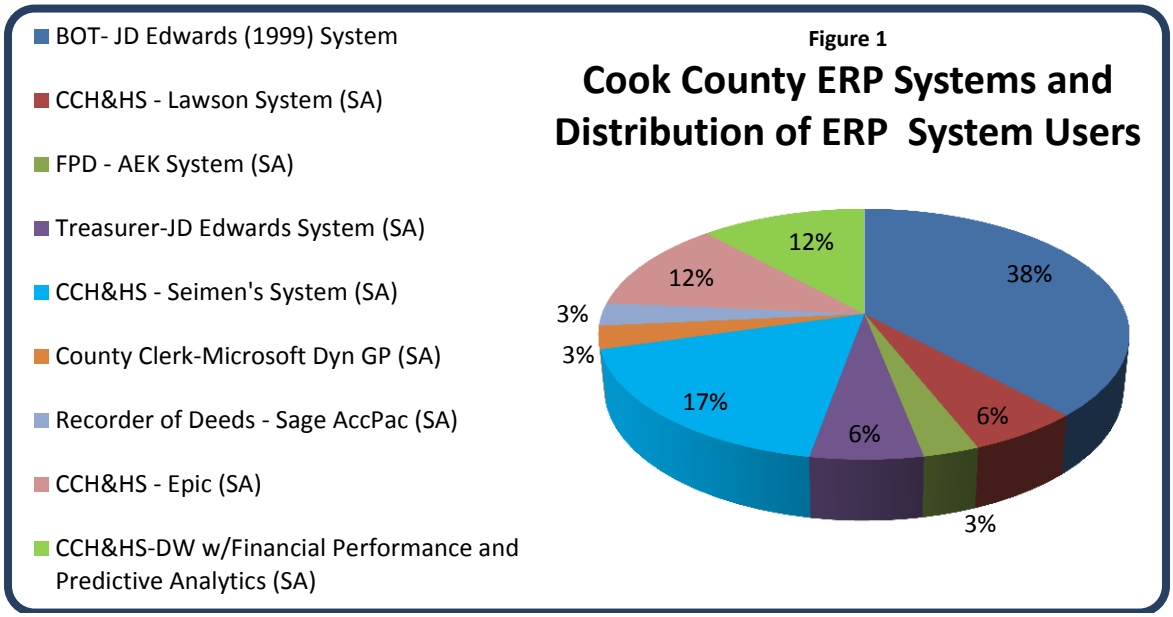


Figure 1

Cook County ERP Systems and Distribution of ERP System Users

Figure 2 conveys that County has invested over $100M in ERP systems since 1999. The Countywide ERP Project will consolidate functions currently supported by (3) of the (9) ERP systems and expressly those that reside on the JD Edwards (1999) system, Lawson system, and AEK system. In so doing, it will standardize back-office business functions to align them more closely with ERP best practices. This will result in a significant number of business process improvements that will reduce operating costs related to the: General Ledger, Accounts Payable, Accounts Receivables, Budgeting, Fund Accounting, Asset Management, Cash Management, Payroll, Human Resources, Benefits, Employee Self-Service, Purchasing, and Vendor Self-Service.

[1] A TCO analysis includes total cost of acquisition and operating costs. A TCO analysis is used to gauge the viability of any capital investment. An enterprise may use it as a product/process comparison tool. It is also used by credit markets and financing agencies. TCO directly relates to an enterprise's asset and/or related systems total costs across all projects and processes, thus giving a picture of the profitability over time.

[2] JD Edwards (1999) is used to identify the system that is managed by the Bureau of Technology, and JD Edwards (2005) is used to identify the system that is managed by the Treasurer's Office.

Figure 2

Cook County ERP Total Cost of Ownership (TCO)

System Description	1999-2004	2005-2010	2011-Present	Total Cost of Ownership (TCO)
JD EDWARDS ERP SYSTEM	$43.5M	$17.0M	$7.5M	$68.0M
(8) STANDALONE ERP SYSTEMS		$24.0M	$16.0M	$40.0M
COMBINED TOTALS	$43.5M	$41.0M	$23.5M	$108.0M

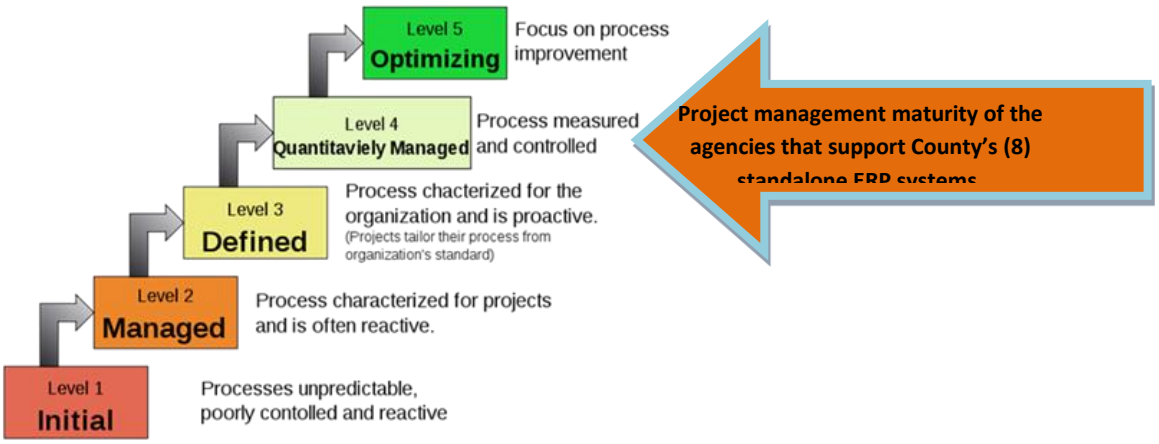
However, the Countywide ERP Project will have no impact on (6) of the standalone ERP systems. Oddly enough, (5) of the (6) standalone systems use the same applications that can be found on the back-office system, but they use the applications to manage citizen-facing business processes, i.e. to interface with cash registers, customer databases, other systems which are unique to the agency. Another standalone ERP system is used for data warehousing, and it extracts specific financial data from other (production) ERP systems, etc. to provide revenue projections and clinical indicators on an executive dashboard.

One-off ERP functions that will not fall under the Countywide ERP Project include supply chain management (SCM), an application that currently reside on the Lawson ERP system that was procured in 2010 by CCH&HS and that must be implemented in 2012 to remedy regulatory issues and to improve revenue at CCH&HS.

The overview of County's ERP systems illuminates the level of functional-overlap that exists in the current ERP environment, and the vast 'opportunity' for cost-savings well beyond the Countywide ERP Project. It also demonstrates that County agencies have successfully managed ERP projects and that they have fairly solid project management skills, as depicted in Figure 3. [3]

Figure 3

Project Management Maturity and Capabilities



[3] Source: http://en.wikipedia.org/wiki/Capability_Maturity_Model

County's most serious ERP problems stems from the fact that it uses an 'upside down cost model' for its largest ERP system implementations. An analysis of both the JD Edwards (1999) cost model and the Lawson (2009) cost model unveiled these facts: (1) more than 50% of the ERP project costs were allocated to some form of consulting service; (2) roughly 20% went to hardware and software costs; (3) another 20+% went to maintenance and support; and (4) less than 10% went to employee training. Secondly, government agencies have more recently been challenged to justify the use of capital funds on large ERP projects that adopt this cost model. They have been asked to prove that ERP is a 'capital asset' and/or to identify its business value.

This prompted an analysis of County's JD Edwards (1999) system to determine its 'value' to Cook County. The findings were quiet alarming and revealed that:

- **less than 60% of the JD Edwards (1999) system features were enabled;**
- **many applications were purchased but never implemented including, e.g. time entry, asset management, grants management, contract management, project costing, and chargeback;**
- **that County separately purchased other systems to perform these business functions;**
- **County paid for maintenance and support on applications that were never used thru 2011;**
- **applications did not align with regulations, e.g. inventory control was configured to provide static inventories for medical supplies and do not comply with JCAHO;**
- **interfaces to revenue generating business processes were not established, e.g. interface to list medical supplies on patient bill;**
- **County's original ERP contract costs went from $16M in 1999, to $22M by 2001, and $40M by 2005;**
- **in 2005, the County Board requested an independent audit of the system due to excessive cost overruns and complaints from the agencies;**
- **vague requirements resulted in the inability to measure how the system benefitted County; and**
- **lack of knowledge related to County business processes made it difficult to meet the needs of business users and resulted in the outgrowth of standalone ERP systems and a maze of desktop solutions.**

In 2010, General Finance Officers Association (GFOA), Deloitte, and a number of leading academic institutions responded to the persistence of ERP failures above 50%, by advocating that large organizations use ERP Centers of Excellence to more effectively address ERP project risks, over the life of the system. This represented a 360 degree shift in how ERP projects had been previously managed because:

(1) required would be dedicated ERP project personnel to serve as the 'custodian' of the system over its useful life;
(2) a system designed to enforce controls and compliance with ERP best practices; and
(3) ERP project leadership by the business owners most impacted by the organizational changes which would be necessary to drive business process improvements.[4]

[4] Source: http://en.wikipedia.org/wiki/Systems_development_life-cycle

Note: The SDLC methodology is used to manage <u>each</u> ERP application that is implemented.

Under the old ERP project model, vendors provided subject matter experts and IT organizations essentially 'tracked' the project, with limited ability to validate what was received, how to measure its value, or how to extend functionality in the system was turned over to them, etc.. The flaw in this model was – *all the business process knowledge and ERP knowledge walked out the door when the project ended!*

ERP CoE have become the gold standard by which to demonstrate the far-reaching business value and public value of large ERP projects. The strategy behind the Cook County ERP Center of Excellence (ERP CoE) is to provide internal expertise that help to drive down what has historically been County's single largest ERP line item expense, i.e. system integration services; to help drive down the operating costs related to the (6) standalone ERP systems; and to provide reusable work products that can be used by other internal teams to reduce project costs and time-to-delivery. Re-useable work products produced by the Cook County ERP Center of Excellence could include business rules, business process portfolio, etc.) Most importantly, dedicated ERP CoE resources are needed regardless of the ERP model that County adopts, i.e. on-premise, remotely-hosted, or in the cloud.

The County ERP CoE has quickly demonstrated itself to be a 'value-added' resource. The respect for the organization has sharply increased the level of participation in the Countywide ERP Project, and County agencies <u>without exception</u> have become more pro-actively engaged in ERP.

Thanks to the contributions of the following agencies, who are listed in alphabetical order, the Cook County ERP Center of Excellence was able to complete this report, at no cost to Cook County. The seven agencies who contributed to this effort included:

- **Cook County Bureau of Finance**
- **Cook County Bureau of Technology**
- **Cook County Clerk**
- **Cook County Forest Preserve District**
- **Cook County Health & Hospitals System**
- **Cook County Recorder of Deeds**
- **Cook County Treasurer**

Other significant ERP 2012 work products completed thanks to the generous support of County internal agencies, and external collaborative-partners include:

#	Name of Work Product	Completed in	Internal Collaborative Partner(s)	External Collaborative Partner(s)	Cost to Cook County
1	**White Paper** **Benefits & Tradeoff of Outsourcing (Functions that Would Otherwise Fall Under ERP)**	May 2012	Office of the President; Bureau of Finance; Comptroller; and Bureau of Technology	Consisted of input obtained from more than (10) organizations, including government agencies; private corporations; academic institutions; associations; and subject matter experts. All of whom are listed in the report.	**Zero $**
2	**First Annual ERP Executive Briefing**	March 2012	Every department under the Office of the President, independently elected officials, CCH&HS, and FPD.	Included (6) speakers from other government organizations in IL and IN, and private corporations. CCH&HS Bureau Chief serving as opening presenter. Event details are listed under www.cookcountyil.gov/erp	**Zero $**
3	**2011 ERP Lessons Learned**	January 2012		Included an analysis of Lessons Learned from (5) local and national orgs who completed or were completing larger ERP projects. Recommendations orgs made related to project staffing; ERP project governance; strategies to reduce project risks; and project costs. Lessons Learned from (4) ERP lawsuits 2010 – 2011.	**Zero $**